

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.  
530 Virginia Road, P.O. Box 9133  
Concord, MA 01742-9133

Telephone: (978) 341-0036

Facsimile: (978) 341-0136

## FACSIMILE COVER SHEET

FAX RECEIVED

JUN 13 2002

Examiner: R. Zeman

Group: 1645

GROUP 1600

Date: June 12, 2002

Client Code: 0050

Facsimile No.: 703-308-4242

From: N. Scott Pierce, Esq.

Subject: Docket No.: 0050.1618-000

Applicants: Leonard Guarente, Shin-ichiro Imai and Christopher Armstrong

Serial No.: 09/461,580

Filing Date: December 15, 1999

Number of pages including this cover sheet: 4Please confirm receipt of facsimile: Yes X No \_\_\_\_\_

Comments:

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NSP/cmb  
06/04/02

PATENT APPLICATION  
DOCKET NO 0050 1618-000

FAX RECEIVED

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE JUN 13 2002

Applicants: Leonard Guarente, Shin-ichiro Imai and Christopher Armstrong GROUP 1600

Application No.: 09/461,580 Group Art Unit: 1645

Filed: December 15, 1999 Examiner: R. Zeman

Title: METHODS FOR IDENTIFYING AGENTS WHICH ALTER HISTONE  
PROTEIN ACETYLATION, DECREASE AGING, INCREASE  
LIFESPAN

OFFICIAL  
# 21  
JM  
6/14/02

CERTIFICATE OF FACSIMILE TRANSMISSION	
I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office	
on 6/12/02	Carol M. Bowerman
Date	Signature
Carol M. Bowerman	
Typed or printed name of person signing certificate	

REVOCATION OF POWERS OF ATTORNEY  
AND APPOINTMENT OF NEW ATTORNEYS AND/OR AGENTS

Assistant Commissioner for Patents  
P.O. Box 2327  
Arlington, VA 22202

Sir:

Massachusetts Institute of Technology, a Corporation duly organized under the laws of the Commonwealth of Massachusetts, is the assignee of the entire right, title and interest in the above-identified application. Massachusetts Institute of Technology hereby appoints the following attorney:

P. Louis Myers, Reg. No. 35,965  
Fish & Richardson, P.C.  
225 Franklin Street  
Boston, MA 02110-2804

09/461,580

-2-

to prosecute the above-identified application and any divisions or continuations thereof and to conduct all business in the United States Patent and Trademark Office. All previously granted Powers of Attorney are hereby revoked.

Statement under 37 C.F.R. §3.73(b) is submitted herewith.

All correspondence should be sent to:

P. Louis Myers, Esq.  
Fish & Richardson, P.C.  
225 Franklin Street  
Boston, MA 02110-2804

Please direct all telephone calls to P. Louis Myers at (617) 521-7872, and all facsimile communications to (617) 542 8906.

Respectfully submitted,  
Massachusetts Institute of Technology

By

  
Lita L. Nelsen

Title Director, MIT Technology Licensing Office

Date

June 10, 2002

STATEMENT UNDER 37 C.F.R. § 3.73(b)

Applicants Leonard Guarente, Shin-ichiro Imai and Christopher Armstrong

Application No.: 09/461,580 Filed: December 15, 1999

For: METHODS FOR IDENTIFYING AGENTS WHICH ALTER HISTONE PROTEIN ACETYLATION,  
DECREASE AGING, INCREASE LIFESPAN

Massachusetts Institute of Technology, a corporation  
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is

- A. ☒ the assignee of the entire right, title and interest in the patent application identified above; or
- B. ☐ an assignee together with ☐ of the entire right, title and interest in the patent application identified above. A separate Statement under 37 CFR § 3.73(b) is being submitted.

The right, title and interest of the above-named assignee in the patent application identified above is established by virtue of:

- A. ☒ An assignment from the inventors of the patent application identified above. The assignment was recorded in the Patent and Trademark Office at Reel 10737, Frame 842-845, or a copy thereof is attached.

OR

- B. ☐ A chain of title from the inventor(s) of the patent application identified above, to the current assignee as shown below:

1. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.
2. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.
3. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Date: June 10, 2002

Name: Lisa L. Nelsen

Title: Director, MIT Technology Licensing Office

Signature: [Signature]

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.  
530 Virginia Road, P.O. Box 9133  
Concord, MA 01742-9133

Telephone: (978) 341-0036

Facsimile: (978) 341-0136

**FACSIMILE COVER SHEET****Group:** 1645**Date:** June 12, 2002**Client Code:** 0050**Facsimile No.:** 703-308-4242**From:** N. Scott Pierce, Esq.**Subject:** **Docket No.:** 0050.1618-001**Applicants:** Leonard Guarente, Shin-ichiro Imai, Christopher Armstrong and  
Heidi A. Tissenbaum**Serial No.:** 09/735,786**Filing Date:** December 13, 2000**Number of pages including this cover sheet:** 20**Please confirm receipt of facsimile:** Yes X No     **Comments:**

Privileged and Confidential - All information transmitted hereby is intended only for the use of the addressee(s) named above. If the reader of this message is not the intended recipient or the employee or agent responsible for delivering the message to the intended recipient(s), please note that any distribution or copying of this communication is strictly prohibited. Anyone who received this communication in error is asked to notify us immediately by telephone and to destroy the original message or return it to us at the above address via first class mail.

@PFDesktop\ODMA\MHODMA\Manage,316612,1  
NSP/cmb  
06/04/02

PATENT APPLICATION  
DOCKET NO.: 0050.1618-001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Leonard Guarente, Shin-ichiro Imai, Christopher Armstrong and  
Heidi A. Tissenbaum

Application No.: 09/735,786 Group Art Unit: 1645

Filed: December 13, 2000

Title: METHODS FOR IDENTIFYING AGENTS WHICH ALTER HISTONE  
PROTEIN ACETYLATION, DECREASE AGING OR INCREASE  
LIFESPAN

<b>CERTIFICATE OF FACSIMILE TRANSMISSION</b>	
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on <u>6/12/02</u>	<u>Carol M. Bowerman</u>
Date	Signature
<u>Carol M. Bowerman</u>	
Typed or printed name of person signing certificate	

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AND APPOINTMENT OF NEW ATTORNEYS AND/OR AGENTS**

Assistant Commissioner for Patents  
P.O. Box 2327  
Arlington, VA 22202

Sir:

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following attorney:

**P. Louis Myers, Reg. No. 35,965  
Fish & Richardson, P.C.  
225 Franklin Street  
Boston, MA 02110-2804**

09/735,786

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Massachusetts Institute of Technology

By

  
Lita L. Nelsen

Title Director, MIT Technology Licensing Office

Date

June 10, 2002

STATEMENT UNDER 37 C.F.R. § 3.73(b)

Applicants: Leonard Guarente, Shun-ichiro Imai, Christopher Armstrong and Heidi A. Tissenbaum

Application No.: 09/735,786 Filed: December 13, 2000

For: METHODS FOR IDENTIFYING AGENTS WHICH ALTER HISTONE PROTEIN ACETYLATION,  
DECREASE AGING OR INCREASE LIFESPAN

Massachusetts Institute of Technology, a corporation  
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is

- A. ☒ the assignee of the entire right, title and interest in the patent application identified above; or
- B. ☐ an assignee together with [ ] of the entire right, title and interest in the patent application identified above. A separate Statement under 37 CFR § 3.73(b) is being submitted.

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- A. ☒ An assignment from the inventors of the patent application identified above. The assignment was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.

OR

- B ☐ A chain of title from the inventor(s) of the patent application identified above, to the current assignee as shown below:

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Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.
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The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.
3. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Date: Lita L. Nelsen

Name: Lita L. Nelsen

Title: Director, MIT Technology Licensing Office

Signature: June 10, 2002



Docket No. 0050.1618-001

# **COPY**

## **ASSIGNMENT**

Joint

WHEREAS, we, Leonard Guarente, Shin-ichiro Imai, Christopher Armstrong, and Heidi A. Tissenbaum, have invented a certain improvement in "Methods for Identifying Agents Which Alter Histone Protein Acetylation, Decrease Aging or Increase Lifespan" described in an application for Letters Patent of the United States, the specification of which:

- ☐ is being executed on even date herewith and is about to be filed in the United States Patent Office;
- ☒ was filed on **December 13, 2000** as Application No. **09/735,786**;
- ☐ was patented under U.S. Patent No. ☐ on ☐.

WHEREAS, Massachusetts Institute of Technology (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the Commonwealth of Massachusetts, and having a usual place of business at **77 Cambridge Street, Cambridge, Massachusetts 02139** desires to acquire an interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue thereon; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of substitution, reissue, divisional or continuation applications and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

-2-

AND, we do hereby authorize and request the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor's Signature:

Leonard Guarente  
Leonard Guarente

State/Commonwealth

of Massachusetts

County of Middlesex

Then personally appeared before me the above-named **Leonard Guarente** and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this 21<sup>st</sup> day of February, 2002.

(SEAL)

Alan P. Frenier  
Alan A. FRENIER

Notary Public

(print name)

My Commission expires 03/14/2005

-3-

Inventor's Signature: \_\_\_\_\_

**Shin-ichiro Imai**

State/Commonwealth \_\_\_\_\_

of \_\_\_\_\_

County of \_\_\_\_\_

Then personally appeared before me the above-named **Shin-ichiro Imai** and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

(SEAL)

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

Inventor's Signature: \_\_\_\_\_

**Christopher Armstrong**

State/Commonwealth \_\_\_\_\_

of \_\_\_\_\_

County of \_\_\_\_\_

Then personally appeared before me the above-named **Christopher Armstrong** and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

(SEAL)

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

-4-

Inventor's Signature: \_\_\_\_\_

**Heidi A. Tissenbaum**

State/Commonwealth \_\_\_\_\_

of \_\_\_\_\_

Country of \_\_\_\_\_

Then personally appeared before me the above-named **Heidi A. Tissenbaum** and  
acknowledged that he/she executed the foregoing instrument as his/her free act and deed this  
\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

(SEAL)

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

**COPY**

Docket No. 0050.1618-001

Joint

ASSIGNMENT

WHEREAS, we, **Leonard Guarente, Shin-ichiro Imai, Christopher Armstrong, and Heidi A. Tissenbaum**, have invented a certain improvement in **"Methods for Identifying Agents Which Alter Histone Protein Acetylation, Decrease Aging or Increase Lifespan"** described in an application for Letters Patent of the United States, the specification of which:

☐ is being executed on even date herewith and is about to be filed in the United States Patent Office;

☒ was filed on **December 13, 2000** as Application No. **09/735,786**;

☐ was patented under U.S. Patent No. ☐ on ☐.

WHEREAS, **Massachusetts Institute of Technology** (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the **Commonwealth of Massachusetts**, and having a usual place of business at **77 Cambridge Street, Cambridge, Massachusetts 02139** desires to acquire an interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue thereon; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of substitution, reissue, divisional or continuation applications and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

-2-

AND, we do hereby authorize and request the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor's Signature: \_\_\_\_\_

**Leonard Guarente**

State/Commonwealth \_\_\_\_\_

of \_\_\_\_\_

County of \_\_\_\_\_

Then personally appeared before me the above-named **Leonard Guarente** and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

(SEAL)

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

-3-

Inventor's Signature: \_\_\_\_\_

*Shin-ichiro Imai*

Shin-ichiro Imai

State/Commonwealth

of Missouri

County of St. Louis

Then personally appeared before me the above-named **Shin-ichiro Imai** and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this 26<sup>th</sup> day of Apr. February, 2002.

(SEAL)

Carol L. Pupillo

CAROL L. PUPILLO  
Notary Public - State of Missouri  
County of St. Louis  
My Commission Expires Apr. 8, 2005

CAROL PUPILLO

(print name)

My Commission expires 04 / 08 / 2005

Inventor's Signature: \_\_\_\_\_

Christopher Armstrong

State/Commonwealth

of \_\_\_\_\_

County of \_\_\_\_\_

Then personally appeared before me the above-named **Christopher Armstrong** and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

(SEAL)

Notary Public

(print name)

My Commission expires \_\_\_\_ / \_\_\_\_ / \_\_\_\_

-4-

Inventor's Signature: \_\_\_\_\_

**Heidi A. Tissenbaum**

State/Commonwealth \_\_\_\_\_

of \_\_\_\_\_

County of \_\_\_\_\_

Then personally appeared before me the above-named **Heidi A. Tissenbaum** and  
acknowledged that he/she executed the foregoing instrument as his/her free act and deed this  
\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

(SEAL)

\_\_\_\_\_  
Notary Public\_\_\_\_\_  
(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_



**COPY**

Docket No. 0050.1618-001

Joint

ASSIGNMENT

WHEREAS, we, **Leonard Guarente, Shin-ichiro Imai, Christopher Armstrong, and Heidi A. Tissenbaum**, have invented a certain improvement in **"Methods for Identifying Agents Which Alter Histone Protein Acetylation, Decrease Aging or Increase Lifespan"** described in an application for Letters Patent of the United States, the specification of which

[ ] is being executed on even date herewith and is about to be filed in the United States Patent Office;

[X] was filed on **December 13, 2000** as Application No. **09/735,786**;

[ ] was patented under U.S. Patent No. [ ] on [ ].

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NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue thereon; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein;

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IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor's Signature: \_\_\_\_\_

Leonard Guarente

State/Commonwealth \_\_\_\_\_

of \_\_\_\_\_

County of \_\_\_\_\_

Then personally appeared before me the above-named Leonard Guarente and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

(SEAL)

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

-3-

Inventor's Signature: \_\_\_\_\_

**Shin-ichiro Imai**

State/Commonwealth

of \_\_\_\_\_

County of \_\_\_\_\_

Then personally appeared before me the above-named **Shin-ichiro Imai** and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

(SEAL)

\_\_\_\_\_  
Notary Public

(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

Inventor's Signature: \_\_\_\_\_

**Christopher Armstrong**

State/Commonwealth

of MASSACHUSETTSCounty of SUFFOLK

Then personally appeared before me the above-named **Christopher Armstrong** and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this 22nd day of FEBRUARY, 2002.

(SEAL)

Donna M. Presterone Notary PublicDONNA M. PRESTERONE (print name)My Commission expires 8 / 16 / 02

-4-

Inventor's Signature: \_\_\_\_\_

**Heidi A. Tissenbaum**

State/Commonwealth \_\_\_\_\_

of \_\_\_\_\_

County of \_\_\_\_\_

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\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

(SEAL)

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
(print name)

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**COPY**

Docket No. 0050.1618-001

Joint

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- ☐ was patented under U.S. Patent No. [ ] on [ ].

WHEREAS, Massachusetts Institute of Technology (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the Commonwealth of Massachusetts, and having a usual place of business at 77 Cambridge Street, Cambridge, Massachusetts 02139 desires to acquire an interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue thereon; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of substitution, reissue, divisional or continuation applications and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

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AND, we do hereby authorize and request the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor's Signature: \_\_\_\_\_

Leonard Guarente

State/Commonwealth \_\_\_\_\_

of \_\_\_\_\_

County of \_\_\_\_\_

Then personally appeared before me the above-named Leonard Guarente and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

(SEAL)

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

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Inventor's Signature: \_\_\_\_\_

**Shin-ichiro Imai**

State/Commonwealth \_\_\_\_\_

of \_\_\_\_\_

County of \_\_\_\_\_

Then personally appeared before me the above-named **Shin-ichiro Imai** and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

(SEAL)

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

Inventor's Signature: \_\_\_\_\_

**Christopher Armstrong**

State/Commonwealth \_\_\_\_\_

of \_\_\_\_\_

County of \_\_\_\_\_

Then personally appeared before me the above-named **Christopher Armstrong** and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

(SEAL)

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

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Inventor's Signature: Heidi A T

Heidi A. Tissenbaum

State/Commonwealth

of Massachusetts

County of Norchester

Then personally appeared before me the above-named Heidi A. Tissenbaum and  
acknowledged that he/she executed the foregoing instrument as his/her free act and deed this  
19 day of March 20 02.

(SEAL)

Judith A. Mondor Notary Public

Judith A Mondor (print name)

My Commission expires 01/20/06